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HOW LONG HAS PELLAGRA EXISTED IN SOUTH CAROLINA?

A STUDY OF LOCAL MEDICAL HISTORY.

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Introduction.—This is a presentation of recorded facts, so far as they are available. Records bearing on the subject, however, are few and isolated, and where they are wanting or connecting-links are entirely missing, for collateral evidence recourse has been had to recollections and traditions, and finally even to judgments and inferences—confessedly not reliable guides either in medicine or in history.

My chief sources of information, however, have been the written records in the case-books of the South Carolina Hospital for the Insane, and the printed annual reports of its physicians. Contrary to expectation the most important and striking clinical memoranda discovered belong notably to the earliest or ante-bellum period of the history of the asylum. Unfortunately, these data are for the most part very brief, and many lacunæ exist, thus necessitating the introduction of a number of separate details to produce a composite picture.

In carrying on my investigations I have conferred both with officials who have long had charge of our patients and with general practitioners. When inferences have been used, I have consulted pellagrologists of presumably unprejudiced mind, and have included their valued opinions.

Certain parallels in the history of pellagra, in this and other countries, have been drawn, and experiences in adjoining states have been cited where they have a bearing upon local conditions.

In reaching conclusions it has been necessary to reject former diagnoses of my own as well as to suggest revision of those of other physicians, including my distinguished predecessors. But, so far

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as possible, the study is impersonal and has been made in the interest of truth, and its spirit is that of confession and explanation rather than of adverse criticism or reprehension.

History.—In our State Hospital, pellagra was first recognized, in ignorance of any previous observation of the disease in the United States, by members of the medical staff about December 1, 1907. A statement of these observations was made at once, orally to officers of the State Board of Health, and on December 30, 1907, a preliminary report was presented, which was published in the 28th annual report of that Board for 1907. Our report was also printed soon afterwards in the *Journal of the South Carolina Medical Association* (Greenville, 1908, IV, 64-76), and in the *AMERICAN JOURNAL OF INSANITY* (Baltimore, 1908, LXIV, 703-725). Some comment was made upon it by the newspapers, one of the first being the *Charleston News and Courier* of January 14, 1908. Such dissemination of the subject at last attracted attention. For in the following spring and summer, although not a little skepticism prevailed as to the actual existence of pellagra in our state and elsewhere in the country, and although it was the object of considerable ridicule, yet a number of cases of the disease were recognized and reported in South Carolina, as well as in other states. The disease was identified with Italian pellagra in the summer of 1908 by two South Carolina physicians.

On October 29, 1908, our State Board of Health held a well-attended conference on pellagra in Columbia, and on November 3 and 4, 1909, under the auspices of the same Board, there was held a National Pellagra Conference in the same place. The transactions of this meeting proved to be a distinct addition to the literature of the subject. Since then annually in November a pellagra clinic has been conducted in Columbia by the State Board of Health. These meetings have served to stimulate more than local interest.

Naturally, among the many questions about the disease, upon which all would like definite information—at least historically and statistically—are: How prevalent is pellagra? and How long has it existed in South Carolina?

In the preliminary report of 1907, nine cases of supposed pellagra, both remote and recent, were described. At the meeting in 1908, Dr. C. F. Williams, the state health officer, announced that he had received 269 replies to 942 inquiries sent to physicians in the

state, reporting 187 cases of the disease. In 1909, after a careful investigation, Dr. Williams estimated that there were 500 cases of pellagra in South Carolina. The report of the Board of Health for 1910 stated that between 500 and 800 cases of the disease had occurred in the state during the year.

In 1911, Dr. J. A. Hayne, the present state health officer, in response to 1200 inquiries, received replies from 250 physicians, placing the total number of pellagrins in the state at about 2100, of whom 1000 were under treatment.

A very brief summary of pellagra statistics by admissions to our hospital is: 1907, 4 cases; 1908, 42 cases, or 7 per cent of total admissions; 1909, 92 cases, or 15 per cent of admissions; 1910, 135 cases, or 20 per cent, and in 1911, up to November 1, 162 cases, or 27.7 per cent of admissions.

These statistics apply to newly admitted cases. In addition to these, cases of pellagra have seemingly developed in patients long resident. While some skepticism about the existence of such a disease as pellagra still persists in South Carolina and elsewhere in the United States, its presence is now quite generally admitted in 36 states besides our own.

Such statistics as those cited above raise the perennial question: Are we dealing with a new disease in epidemic form, or have we an increasing number of cases of a disease long endemic?

With slowly accumulated information, many physicians in South Carolina can now establish on retrospection the presence of pellagra in their practice, at least a decade before it was first reported, although the right diagnosis had not been made. We know, however, that Dr. H. E. McConnell, of Chester, S. C., did make the correct diagnosis in 1903. What evidence have we of its previous occurrence?

Under date of October 23, 1909, Acting Assistant Surgeon Sams, of the U. S. P. H. & M.-H. Service, reported from Charleston in the *Public Health Reports*, that "Pellagra, as such, has but recently been recognized in this city, the first case having come under treatment in March, 1908. There is a very general impression among the local physicians that pellagra has existed in the city for probably twenty years or more, and been incorrectly diagnosed as 'eczema,' 'dysentery,' 'intestinal tuberculosis,' etc., with dementia as a complication, or the reverse."

Besides the names erroneously applied to pellagra as quoted above by Dr. Sams, I may add several others: "syphilis," "malaria," "acute delirium," "hookworms," "dermatitis ex-foliativa," "tuberculosis of the skin," "liver spots," "scurvy," "neurasthenia," "meningitis," "nurses' sore mouth," "sprue," "meningo-encephalitis," "neuritis," etc.

In answer to the question: If pellagra has existed in this country for years, why has it not been recognized? I beg to present two quotations:

In Spitzka's Treatise on Insanity (New York, 1883, pp. 124-125), it is stated that "*Pellagrous insanity* will not be discussed in this volume as it does not occur in America, and it is limited to such countries as Italy, where maize forms a staple article of diet, and where the disease known as *pellagra*, which is attributed to the living on spoiled maize, occurs in an endemic form."

Osler says in his Practice of Medicine (6th edition, 1906, p. 384), "Pellagra . . . occurs extensively in parts of Italy, in the south of France, and in Spain. It has not been observed in the United States."

It is not necessary to cite at this time other equally reliable writers to the same effect. The authorities said that pellagra did not exist in this country; therefore it was not looked for or, if suspected, a tentative diagnosis was given up out of respect to "authority." A. van Harlingen, the Philadelphia dermatologist, had stated, however, in 1882 that the disease was likely to appear in this country at any time.

The unpreparedness of the American medical mind to recognize pellagra, may best be illustrated by my citing again the fact that several years ago, one of the highest authorities on diagnosis in the United States, while visiting in South Carolina, rendered the opinion that a case now recognized as pellagra, was suffering from "glossitis." The recalling of such opinions may not be flattering to one's diagnostic acumen, but it was the custom in Europe also for more than a century for pellagra to be misinterpreted and misnamed.

We may, with advantage, recall what is said by Babes and Sion upon this subject: "It is probable that pellagra appeared in Europe long before its scientific description. It was, however, classed with other different forms of disease, probably with various

skin diseases, with diseases in general, especially with chronic intestinal and nervous diseases, as well as with mental diseases: especially would a disease with the very changeable symptoms of pellagra be considered as a manifestation of leprosy and scurvy."

So thorough and competent a student of the literature of pellagra as Sambon has this to say relative to the slowness with which the disease has always been recognized. "An important reason why pellagra was not described sooner, is that it was confounded with other diseases, such as eczema, leprosy, erysipelas, and scurvy. Pujati, who first established the presence of pellagra in Venetian territory where scurvy was common, named it "Alpine Scurvy." Odoardi retains this name because, he says, the two diseases have a common cause, produce like effects, and are cured by the same remedies. Sartogo (1791) called it "Mountain Scurvy," and Aldalli (1791) "Scorbutic Paralysis." Other writers referred to by Sambon have noted the resemblance of and alliance between scurvy and pellagra. It is important to bear this in mind in connection with clinical reports and opinions brought out further on in this paper.

The variety of names by which pellagra was called in Spain and Italy and France, is paralleled in the New World. For years before its final recognition in our hospital, the colored female attendants used to speak of it among themselves as the "rough skin" disease—a repetition of the *pellè agra* of the Italian vulgate. Its supposed relationship with scurvy when it was called "Alpine Scurvy" around Venice, is duplicated by the recorded opinions of early and recent physicians in our hospital, as I shall show later.

At the pellagra clinic held in 1910, a physician much interested in the disease asked me to look up the records of a colored woman whom he had sent to the hospital some years previously, as he was now satisfied she had pellagra. This is what I found:

Hospital Case No. 8990. B. B., colored woman. Admitted Aug. 16, 1899. Age 36 years. Married. Native and resident of Marlboro County. First attack. Duration three weeks before admission. Menses irregular. Physicians' certificate: "Patient has attacks of an hysterical nature and depression over pigmented condition of skin." Examination on admission: "Of stupid appearance. Pupils normal; tongue clean and dry; straight; speech incoherent; nutrition fair. Heart and lungs normal. Some cough. Temperature 98.4 degrees F. Pulse 98. Respiration 14. Weight 98 pounds. Sleep disturbed. Skin of hands black and peeling off. Patient

has a chronic diarrhea. No fever generally. Converses sensibly and is anxious to get well and go home." Patient failed steadily, and after a hospital residence of three and a half months, died. Assigned cause of death: "Intestinal tuberculosis." On November 5, 1910, an attendant employed in our hospital since 1897, who remembers the case, as it was one of the first of the kind she saw, recalls these facts about her: "The patient had a rough, thick, scaly, dark-colored rash on the backs of her hands. The inflammation was also around her mouth and upon the forehead. The feet were black and scaly. Her diarrhea was very bad. Before she died, she became rigid and had spasms."

That this was a case of unrecognized pellagra there can now be no doubt.

Following up this suggestion, I have gone through the hospital case-books of the last decade and have found notes also made by Dr. Sarah Campbell Allan on other patients that clearly indicate the presence from time to time of several forms of pellagra as we know it to-day. With your indulgence I will cite some of the most noteworthy:

No. 9081. C. S., colored woman. Resident of Beaufort County. Admitted October 22, 1899. "The patient seems quite feeble; has diarrhea, sore mouth, and appears to have been salivated; cervical glands enlarged, irritating vaginal discharge, excoriating the parts. Probably specific." The patient died November 9, 1899, the assigned cause of death being cerebral syphilis.

No. 9277. M. S. Colored girl from Spartanburg, aged 15 years. Admitted April 17, 1900, and died the following October. Became bed-ridden and, for some time before death, "had a bullous eruption all over the body of the nature of pemphigus. Assigned cause of death 'general tuberculosis.'"

No. 9576. F. E. White woman, aged 33 years. Married. Admitted December 2, 1900. Died of "general tuberculosis" after a hospital residence of one year and eleven months. It is noted that the "patient's health has been poor for the whole time of her stay. She had several carbuncles all over the body for months, and was treated with difficulty. Had frequent attacks of diarrhea and eczema of feet and legs, from dew poison, and was emaciated for months."

No. 10208. N. C. White woman. Single. 25 years old. Admitted April 28, 1902. The patient is described as "profane, suspicious, suicidal. In July she is recorded as not doing well. Hands dry and brown. Apprehensive. Was given thyroid extract, gr. v, t. i. d. November 24, losing ground. Bed-ridden, depressed and apprehensive, refused nourishment and became emaciated. Death followed a series of muscular spasms. Diagnosis: Meningo-encephalitis."

No. 10224. M. A. R. White woman. Single. Aged 59 years. Admitted May 1, 1902. Described as melancholy. Fears that she will kill her children and threatens to get into the well. On admission was restless and noisy at night. In May, 1904, she is reported as having eczema of the hands and having failed in health for several months, died from intestinal tuberculosis.

No. 11860. E. F. M. White woman. Married. Aged 45 years. Resident of Barnwell. Admitted June 20, 1905, suffering from acute melancholia. This patient was ill upon admission, with bowels badly deranged and a greenish vaginal discharge. Her bowels continued troublesome. Had constant cough, eczema on hands, which also did not respond to treatment. Grew steadily worse, and died November 9, 1905, from general tuberculosis.

These meager records have been carefully transcribed, but they have also been supplemented by the memories and revised opinions of the physicians and nurses who attended the patients, and it may be affirmed that all these cases represent some form of what is now called pellagra. The co-existence and diagnosis, however, of other diseases, notably tuberculosis and possibly syphilis, are not denied.

Of interest here is the comment of Lombroso that "In Trieste are found a number of cases of albuminuria and of phthisis associated with pellagra. One can thus understand how the older Italian physicians confounded pellagra with phthisis."

It will be recalled, as part of the recorded history of the subject, that Dr. Sandwith, of London, having rediscovered pellagra in Egypt in 1893, has written that towards the end of the last century, suspecting that it existed in our Southern States, he corresponded with medical authorities and local physicians in this country, but failed to establish his theory through the denial by his correspondents of its existence here.

I am, myself, now satisfied that pellagra has been in our institution for twenty years. Dr. J. L. Thompson, assistant physician, is of the same opinion regarding its presence since 1882.

Miss Irwin, now supervisor in the white women's department, who entered the service in 1884, is able to recall cases of pellagra among the white women almost from the date of her entrance; while a colored male attendant, J. R. Singleton, carries the memory of it back to about the same period among the colored men.

Dr. H. N. Sloan, of Ninety Six, S. C., asserts that pellagra was diagnosed as such in the early 70's in our asylum while he was assistant physician, but no written or printed record of the name has been found.

Dr. D. S. Pope, of Columbia, says that at least two cases of pellagra occurred in the South Carolina Penitentiary in the middle 80's. In making his diagnosis of these cases, he considered pellagra as a possibility, but ruled it out because the authorities said it did not occur in the United States.

In May, 1908, after studying, in one morning, eight or ten cases of pellagra in Chester, with Dr. H. E. McConnell, we visited Dr. A. F. Anderson, then over 90 years of age, but unusually clear mentally. Dr. Anderson had had a very extensive practice in Chester County for upwards of 60 years. He was also surgeon of the 6th South Carolina Regiment during the war. We described to him the cases we had just seen. He was much interested, but declared, greatly to our disappointment, that he could not recall ever having seen the clinical picture we described.

As evidence corroborative of recollections in South Carolina, I may state that the older physicians at the Georgia State Sanitarium at Milledgeville, think that pellagra has existed there probably for about twenty-five years; and those at the asylums at Raleigh and Goldsboro, N. C., for ten years prior to 1909, when inquiry was made. Dr. I. M. Taylor, of Morganton, N. C., places the probable occurrence of pellagra in the State Hospital there at 22 years prior to the same date. Drs. Wood and Bellamy, of Wilmington, N. C., have traced a case of pellagra in that state to 1889.

The earliest published accounts of pellagra in the United States, yet reported, were observed in asylums at Utica, N. Y., and Somerville, Mass., in 1863-64; also it is claimed that both pellagra and hookworms prevailed at the Andersonville, Ga., prison in 1864.

Of course, if pellagra has existed in South Carolina all these years, some cases of it, as now, must have been committed to our hospital, and *vice versa*, its occurrence in the asylum would indicate its presence in the state at large.

Furthermore, if pellagra has been present in the state and in the asylum, the deaths of patients suffering from it must have been recorded under other diagnoses, because of our ignorance of the condition. What then do the mortality tables of the annual reports show that may now be regarded as probable pellagra?

Following these reports backwards, I find, in the report for 1904, a case recorded under the diagnosis of dermatitis exfoliativa, for which diagnosis I am responsible. I remember the case

well, for it puzzled me greatly, and I made a strong appeal to the authorities, both of general practice and dermatology, for help. When the time came to sign the death certificate, the diagnosis recorded above was the best I was able to render. Of course, I know now that the poor woman, whose epidermis peeled off and whose hands and feet became gangrenous, died of pellagra of the so-called "wet" type.

In passing, I recall another case now known to be pellagra, in a colored woman at about the same time, which I diagnosed and treated as "scurvy." She is still living and has had only one relapse—last year—in the seven or eight subsequent years.

During my term of service since 1891, the most common diagnoses that I find as applied to fatal cases of probable pellagra, are: "intestinal tuberculosis," when the diarrhea was most pronounced; "general paralysis" and "meningo-encephalitis" for the cerebral and spinal cases; "syphilis," when the skin lesions were marked; and "acute delirium" for the fulminating mental type.

In the mortality tables of the earlier annual reports, I find from 1890 to 1878, "consumption" and "exhaustion" are the most commonly assigned causes of death, but besides these, "inanition," "marasmus," "anasarca," "dysentery," "ascites," and "gangrene" are frequent. Chronic dysentery and chronic diarrhea, which play so large a part in the earlier mortality lists, are comparatively rarely mentioned. To cite a case of this period, we may take that of: Miss E. L. White woman. Admitted from Charleston County, May 30, 1887. Died May 11, 1891, from "inanition." Previous history: "For about three years, this lady has been having hemorrhages from the uterus. For the last three months, these have been checked and the periods normal. She is restless by day, but sleeps well at night. Her mental derangement is increasing and she believes that she has a number of suitors, but her sister prevents her seeing them. Dr. X. [a famous specialist of New York], whose patient she has been, considers her a case of 'cerebral anemia' with prognosis bad."

The patient is described as a decided blonde, cross and irritable, with a mania for eating corn starch. She would quarrel with her nurse until she went to the laundry and got starch for her. She became emaciated and died from obstinate diarrhea. As pellagra is now understood, she no doubt had that disease, associated with

amylophagia. It will be recalled that Dr. C. C. Bass, of New Orleans, has recently directed attention to this association.

For some years previous to 1876, I find records of many cases of chronic diarrhea and dysentery, as well as one each of pemphigus and gangrene. In 1875, Dr. Ensor, the superintendent, assigns the death of four patients to "chronic diarrhea, resulting from organic disease in the great nerve centers," and in 1873, "six (deaths) from chronic diarrhea, resulting from disease of the brain." But we must not forget that chronic intestinal disorders have long been recognized as the bane of charitable institutions in this country and abroad. Therefore, the occurrence of these conditions does not necessarily denote the certain existence of pellagra. These notes are important chiefly in connection with present conditions and earlier records.

In 1864, Dr. Parker states that most of the causes of death were the result of long-continued mental and physical disease, including convulsions, chronic diarrhea, consumption and dropsy. In 1859, Dr. Parker states that the most prolific cause of death was the result of long-standing chronic diarrhea. In the case-books I find a note of purpura recorded as lasting over a year.

From the printed annual report of 1850, I take this extract, written by the superintendent, Dr. D. H. Trezevant, one of the most distinguished physicians ever connected with the institution, which he had served from its opening in 1828:

"In every institution many patients are admitted with shattered constitutions, whose vital powers are exhausted, and the recuperative energies of the system entirely destroyed. Such is usually the termination of those who become imbecile, either from neglect or mismanagement, in the earlier period of the attack; their brain and nervous system give way, and they die from bowel-complaint, dropsy, and the effect of exhausted powers.

"Many have been admitted this year with so feeble a circulation that their limbs and bodies have become purple, and after the closest and most sedulous attention, ulcerations would occur, and they died from the effects of the long-continued irritation. Many of those who have been some time with us have perished from anasarca, diarrhea, and epilepsy. We have now two in the institution threatened with purpura hemorrhagica, and as they are idiotic, they will most certainly die. It is very difficult for a lunatic to rally if once his bodily health becomes injured, and he suffers from the prostration consequent upon excessive discharge of the mucous surfaces. Diseases of the abdominal and thoracic viscera kill above one-half of our patients."

To get an unbiased opinion, I submitted this quotation to Dr. F. M. Sandwith, of London, who not only knows pellagra when he sees it, but also when he reads imperfect descriptions of it. This is what he has written me:

"The report of your predecessor is interesting and, of course, it may betoken pellagra, but I think it just as likely to have been the effect of scurvy. Sixty years ago, medical terms were not used with the precision that they have now-a-days."

The latter comment is, however, beautifully illustrated all through this investigation.

Dr. C. H. Lavinder, of the Marine-Hospital Service, has written from Savannah, Ga.:

"That typewritten copy from an old asylum report was of great interest. It looks very much like pellagra to me. That is, it seems to me as if they were having at least a few cases of pellagra."

A careful analysis of the statement of Dr. Trezevant, taken in connection with what precedes and follows, makes me believe that he had before him the clinical picture, obscure in its outlines, it may be, but still the picture of pellagra when he wrote the above paragraphs. No doubt, scurvy was a distinct entity to him and he would have recognized it. Pellagra was probably unknown to him as it was to most of his successors even to our day. Furthermore, cases of scurvy were not likely to occur among an agricultural people in the general population in ante-bellum days, and even if it did, to go unrecognized.

In looking up the clinical records of Dr. Trezevant's superintendency, I have found frequent references to cases of diarrhea or dysentery and exhaustion. But the proportion bears no relation or comparison with pellagra as we now have it in our statistics. Dr. Trezevant had seen practically all the cases under treatment for the 22 years prior to the report of 1850, first as regent (manager) and from 1836 as physician.

It has been impossible to go over, with care, all the case-books. In the period before 1850 there are brief notes by Dr. Trezevant upon cases of probable pellagra, but it will save time and space to reproduce at length a minutely recorded case, especially as it belongs to our very early history. The case is recorded in the

writing of Dr. James Davis, the first physician of the institution, in Case-book No. I, pp. 160-163:

James Craig. Aged 28 years. Single. Received from Lancaster District February 14, 1834—the 118th patient admitted to the lunatic asylum.

The patient had recovered three years previously from an attack of insanity lasting a month or two. The existing attack began suddenly three months before admission. The preliminary history states that the patient was violent, homicidal and suicidal. The records show that for a time after admission he received, without benefit, the usual revulsive treatment of the period.

April 15th, *Insomnia and profuse diarrhœa are noted.* (From this date the records are copied *verbatim et literatim*. See the attached zinc plate reproduction. Italics are used where the symptoms indicate pellagra.)

"May 2nd, Ord. 20 grs. P. G. Camph. to be added to each dose. 5th, Better rather than worse—Med. continuant. May 23d. More quiet—*bowels loose*.—Cont. Laxa. Medicines except the mercury—Discont: it as his *gums are inflamed with some pytalism*—27th, Continue camph. and Hyos:—June 4th, *Emaciates*—cont: med.—*has diarrhœa*—Give Cret. & catechu—7th, Diarrhœa continues—Ord. Calomel: 15 grs. in 5 gr. doses, 2 hours apart; with Cret: ppt.—Discontinue Hyos: & camph: for the present—10th, *Diarrhœa has ceased*—he is stronger—10th, *Tendency to diarrhœa*—Ord. an occasional dose of catechu & Chalk—15th, looseness disappeared—18th, *Very crazy*—natl. stool. Ord. Prussic acid: 1 drop every hour—19th—Acid produces no sensible effect. Cont: same doses today—tomorrow encrease to 2 gutt:—next day 3 gutt: 22nd, Produced no manifest effect except that there seems to be more mental composure. Ord. Suspension Meds. 25th, Same. 27th, decidedly better in mind—28th, *Seized with another return of diarrhœa*—Ord. Cret: & laud:—29th, *Diarrhœa very severe—liquid—but natural color generally—sometimes white & chylous.* Ord. Sp: Camph 15 gutt: with 10 grs. cret: every 2 hours. 30th, *Emanciates—bowels irregular*—Ord. Diet, boiled milk & dry bread—July 2d, Same—3d, *Bowels too loose at night.* Ord. Cal 5 grs. July 4th, Ord. Canell: Alb: 25 grs. bis in die—5th, Rather better. 7th, Do. Ord. 1 Dr. Solut. S. Quin. every morning—in addition to the canel. alb:—16th, bowels better—health improves—mind at times very crazy; but in the main better. 22nd, Same, bowels a little disposed to diarrhœa. Ord. Lac. Asafœtid: i. e. 10 grs. G. Asafœt: noct. maneq: dissolved in water—Aug. 10th, mind the same—*Bowels loose, especially of nights.* Ord. Sulphuret: Hydrogen 10 grs. noct. maneq:—Omit Lac. Asafœt:—12th, *Mends—bowels less loose*—20th, The sulphuret seems to control the diarrhœa—encrease the dose to 15 grs.—*The skin of the upper part of the feet turned of a sombre brown color—perhaps some form of the purpura*—Ord.—Med. continuant:—and a lotion of red oak bark decoctⁿ to feet—31st, Better—Bowels more regular—*feet that got into sores healing.* Sep. 5th, Bowels too loose again—the Hepar Sulphur: has been discontinued for a few days for want of the article—Ord. Commence with again—7th

Bowels too loose—mind the same—gains flesh—10th, *Bowels still loose—feet better*—no other change—Ord. A course of minute doses of calomel and Pul: Ant: say, 2 grs. P. Ant: & 1/16 of a gr. of calomel three times a day, morning, noon & night. My object is to promote a continued stimulation on the extreme vessels & nerves for a long period—so regulated as to avoid the sedative action of the mercury on the one hand and salivation on the other—16th, *The Purpura encreases and is spreading over the hands—as I suspect this affection is connected with a scorbutic habit*, I apprehend the mercurial course will disagree—Ord. Discont: mercurial, and substitute 6 grs. Acid: Tartar: Mane nocteque—23rd, no better—*Diarrhœa at night as bad as ever*—and for the last two days have given a wineglassfull of decoct: of red oak bark instead of the tartaric acid—but with no good effect.—Ord. Discont: Decoct: red oak bark; and administer eight drops of Tr. Iodine night and morning—to be encreased one drop every night—Oct. 4th, *Diarrhœa at night incorrigible*—Ord: Add a decoction of Liatris Spt: to each dose of Iodine—Oct. 5th, Bowels rather worse—Ord: Discontinue all med: except the decoctⁿ of the Liatris—give that pretty strong, half a tumbler night & morning. 8th, *Much puffing of the face and feet—purpura reappearing.—Bowels equally loose*—Stools more colored—Ord. Tr. Colchicum 8 gutt. noct: mane: in addition to the Liatris—12th, Swelling diminished—bowels worse—Discont: colchicum & Liat. 15th, *Same—His case is decidedly scorbutic*—Ord. a diet of turnips and horseradish—25th Rather better—Nov. 1st, As perhaps the diarrhœa depends on ulceration of intestines, discontinue all other medicines, and give 1 gr. Sal. Mast: every morning and 2 grs. every night. Also continue diet of turnips. 10th, Rather better—17th, He is no better—Ord. Discontinue the Sal. Mast: & give 10 grs. Ext. Cicuta nocte maneque. 21st, *Gets worse*—22nd, *He expired*.

The original notes of this interesting case have been submitted for criticism among others to Drs. Lavinder and Grimm, of the U. S. Public Health and Marine-Hospital Service; to Dr. Robert Wilson, Jr., of Charleston, chairman of the South Carolina State Board of Health; and to Dr. J. J. Watson, of Columbia. They all independently agree that Dr. Davis has described an undoubted case of pellagra, as we know the disease to-day.

In commenting upon the case, Dr. Sandwith, the London pella-grologist, writes: "Many thanks for sending me the copy of the interesting record of 1834 from your hospital. The case may well have been pellagra, but I suppose it might be argued that it was scurvy with purpuric rash."

Scattered through this ancient case-book are records of similar cases, but none so complete. Some of the phrases used by the same writer in describing other cases may be noted, as "swelling

of the feet and legs with redness of the skin" of a patient who died of diarrhœa, December, 1835. Another patient with three to six ash-colored and very offensive evacuations a day, had a "tongue too red and glazed"; another with "face and legs puffed with a singular puffing, not edematous, such as all our fatal filth-eating patients are attended with, whether attended with diarrhœa, dysentery or chronic fever." Still another patient, S. J. M., admitted in 1828, had in January, 1832, "an eruption somewhat herpetic on his neck, shoulders and arms. February 20. Eruption considerable. March 19. Eruption continues. In ordinary health April to July." Another patient admitted April 3, 1834, had dysenteric symptoms.

"Aug. 1st, legs swelling. 14th, bowels morbidly irritable. 20th, bowels less irritable, legs very purple or rather red. Legs less swollen, but will die. Sept. 1st, swelling diminished: Diarrhœa increased. 5th, suddenly seized with spasms and cramps of left side and limbs. Diarrhœa continues. 7th, Delirious. 16th, Expired, emaciated to a skeleton, this morning."

Conclusions.—It appears to me from all these imperfect and detached records that there has been in our institution for many years, probably from its opening in 1828, an elusive malady which has puzzled all physicians in charge. Some of these cases have developed seemingly in the institution, but the large majority of such patients have been admitted with the disease, thus establishing the fact of the endemicity of the condition.

Opinions about the disease have varied with the physicians, but the similarity of the condition to scurvy has been recognized early and late, and for a long while—1834 to 1865—it was also considered of a purpuric nature.

If we admit upon the testimony of those now living the existence of pellagra in our asylum, and, therefore, in the state at large, for 30 or 40 years or more, how shall we deny its presence here 60 or 80 years or even longer, in the light of Dr. Trezevant's published opinions and Dr. Davis's clinical notes? On the other hand, how shall we explain the recent great increase in the number of cases? If pellagra had existed in its present proportions it could not have been overlooked altogether or been entirely concealed under erroneous diagnoses.

I think I may be pardoned for quoting a paragraph from our preliminary report to the State Board of Health in December, 1907:

"It is the opinion of the older members of the staff, that cases presenting pellagrous symptoms have appeared among our patients for some years, and the real nature of the malady has not been fully recognized and determined, but that latterly it is becoming much more frequent. These patients have come from various parts of the state, being possibly somewhat more numerous from the Piedmont section."

These early inferences have been fully confirmed by later experiences and investigations. Therefore, to one familiar with the conditions and disease-picture of pellagra as found in South Carolina to-day, these notes on medical history render it highly probable that pellagra has existed in the state for very many years, but under a varied diagnostic nomenclature.

In the early days, the prevailing fatal diseases as recorded in our hospital were "chronic diarrhea" and "dysentery"; in the middle or post-bellum period, these terms were largely supplanted by "consumption," "exhaustion," and such vague diagnoses as "inanition," "marasmus," and "anasarca"; while in the last two decades, "tuberculosis," "meningo-encephalitis" and "syphilis" have taken precedence over the older and time-honored diagnoses. Can we infer that under these terms some cases of pellagra may have been hidden and misinterpreted?

Making due allowance for differences in the personal equation of the several observers, we cannot believe that changes in endemic conditions have been so great or radical as is implied if we accept the theory that pellagra is a new disease in South Carolina. For evidence is accumulating which proves that as the diagnosis of pellagra becomes more common, some of these other diseases have notably decreased. Recognizing also that pellagra has always been a disease of most subtle and obscure nature and difficult to diagnose in new territory, we cannot but suspect that if such a malady exists among us to-day, to the extent statistics show, then the same condition must have been present in our state for a long while, under many of the disguises it has always assumed.

It cannot, however, be affirmed with equal probability that the disease has prevailed for nearly a century in anything like its present proportions. To explain this increase is one of the prob-

lems of the epidemiology of the disease. Probably pellagra has been endemic in the state for many years, but recently, from some cause, an epidemic has occurred.

As stated in the introduction, this is a presentation of a few interesting records, some memories and traditions and not a few inferences. From such data as I have presented, each may draw his own conclusions.

Personally, I cannot claim to have answered directly the interrogative title of my paper, but from the facts and traditions here assembled I feel convinced that pellagra is by no means a new disease in South Carolina and that it has probably been present in our State Hospital from its opening in 1828. Beyond that period, I have no data. It is worth remembering, however, that in 1829 the first publication about pellagra in France appeared. This event marked the beginning of many decades of interesting investigation and controversy now a part of the history of the disease.

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